



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of)
Raymond H. Riner) Group: 2831
Serial No.: 10/016,398)
Filed: December 10, 2001)
Title: RECEPTACLE BOX FOR AN)
UNDERFLOOR SYSTEM) Examiner: Angel R. Estrada

LETTER

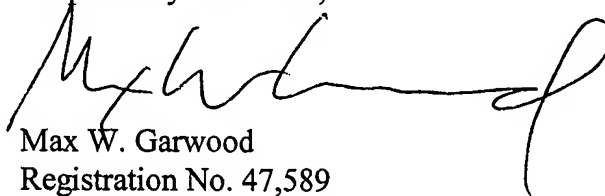
MS Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed herewith, in triplicate, is the Brief of Appellant in the above-identified patent application. The \$340.00 fee is enclosed.

In the event Applicant have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicant hereby conditionally petitions therefor and authorizes that any charges be made to Deposit Account No. 20-0095, TAYLOR & AUST, P.C.

Respectfully submitted,


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CERTIFICATE OF MAILING

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NAME OF REGISTERED REPRESENTATIVE


SIGNATURE

May 24, 2005

DATE

AF/2831
PATENT *[Signature]*

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BRIEF OF APPELLANT

Ms Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This appeal is taken from the decision of the Examiner, dated December 23, 2004, finally rejecting Claims 1-3 and 5-15, all of the claims that are under consideration in the above-captioned patent application; and the Advisory Action, dated March 9, 2005 in which the Examiner reiterated the rejection of the aforementioned claims. Appellant timely filed a Notice of Appeal in this matter on March 28, 2005, along with a petition for a one month extension.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is Pent Technologies, Inc., a corporation organized and existing under the laws of the State of Indiana, which owns the entire interest in this patent application as set forth in the underlying claimed invention.

II. RELATED APPEALS AND INTERFERENCES

No related Appeals or Interferences are known to the Appellant.

06/01/2005 ZJUARI 00000004 200095 10016398

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III. STATUS OF CLAIMS

Pending: 1-3 and 5-15.

Canceled: 4.

Allowed: None.

Objected To: None.

Rejected: 1-3 and 5-15.

Withdrawn from Consideration: None.

On Appeal: 1-3 and 5-15.

A clean copy of claims 1-3 and 5-15, all the claims under appeal, is included as an Appendix to this Brief.

IV. STATUS OF AMENDMENTS

An Amendment was filed on September 18, 2003 and was entered by the Examiner.

V. SUMMARY OF INVENTION

The present invention relates generally to an electrical junction box configured for installation in a floor. More specifically, the invention relates to an underfloor receptacle box.

Referring now to the drawings, and more particularly to Fig. 1, there is shown an underfloor receptacle box 10 which generally includes housing 12, lid assembly 14 and mounting assembly 16. Underfloor receptacle box 10 is mounted in a floor and is coupled with under the floor electrical power, data communication and/or telecommunication sources to provide access to electrical power and/or communications above the floor. (Page 3, lines 16-20)

Now additionally referring to Figs 2 and 3, housing 12 includes side walls 18, a bottom 20, supports 22, grommets 24 and an electrical connector 26. There are four side walls 18 which

are connected at their bottom edge to bottom 20 which together form a rectangular-shaped box with an open top. Openings in side walls 18 allow for the mounting of grommets 24 and electrical connector 26. (Page 3, line 21 through Page 4, line 2)

Supports 22 are L-shaped bracket pieces which are positioned below the top edge of two opposite side walls 18 and are attached thereto. Supports 22 provide support to and a place of attachment for mounting assembly 16. (Page 4, lines 3-7)

Electrical connector 26, also referred to as pass-through connector 26, is connected to housing 12 and passes electrical power and/or signals therethrough. Electrical connector 26 is configured to receive a mating power connector 27 on the exterior of housing 12 in order to receive electrical power and/or signals. The portion of electrical connector 26, that is in the interior of housing 12, is configured to receive a mating connector that is electrically coupled to a receptacle included in mounting assembly 16. Power connector 27 is detachably connected to pass-through connector 26. (Page 4, lines 11-16, and the June 14, 2002, amendment to the specification)

Lid 30 includes slots 34 and reinforcing ribs 36. Slots 34, of a width larger than a power or communication cord, are arranged along an edge of lid 30 opposite hinge 31. Slots 34 are positioned such that they coact with the positioning of retaining hooks 32 to provide for passage of power and communication conductors from the interior of underfloor receptacle box 10 to an above floor application. Reinforcing ribs 36 are integral with lid 30 and are positioned to provide structural support to lid 30. (Page 5, lines 5-10)

Mounting assembly 16, also referred to herein as an insert, includes support edges 38, first angled mounting wall 40, second angled mounting wall 42, bottom mounting wall 44, communication/data receptacle 46 and electrical receptacle 48. Support edges 38 are arranged such that when mounting assembly 16 is installed in housing 12, support edges 38 are

substantially parallel to supports 22 and are supported thereon. Support edges 38 and walls 40, 42 and 44 may be formed as a single monolithic element. (Page 5, lines 11-16)

First angled mounting wall 40 and second angled mounting wall 42 are each connected along one edge to a support edge 38 and at an opposite edge to bottom mounting wall 44. The angle at which walls 40 and 42 are arranged allows for the easy engagement of the receptacles mounted thereto by mating plugs. The combination of walls 40 and 42 are configured to align bottom mounting wall 44 such that it is spaced above and substantially parallel with bottom 20 thereby allowing a wireway passage therebetween. The wireway provides a place for coupling conductors to be routed from receptacles 46 and 48 to electrical connector 26 and/or through grommets 24. (Page 5, lines 17-24)

Communication/data receptacle 46 and electrical receptacle 48 are connected to walls 40 and 42 such that electrical conductors are coupled to receptacles 46 and 48 through openings in walls 40 and 42. There may be a plurality of receptacles 46 and 48 connected to walls 40 and 42. Electrical receptacle 48 includes electrical cable/connector 50 which is detachably electrically coupled to electrical connector 26. Cable/connector 50 can be configured to connect in alternate ways to electrical connector 26 to provide different power configurations to electrical receptacle 48, such as different voltages and single or three phase power. Communication/data receptacle 46 can alternatively exist as separate data and telecommunication receptacles. Data cable 52 and telephone cable 54 enter housing 12 by way of an opening in grommets 24 and connect to the wireway side of communication/data receptacle 46. (Page 6, lines 1-10)

The reconfiguration of underfloor receptacle box 10 is accomplished by removing lid assembly 14, detaching mounting assembly 16 and disconnecting cable/connector 50, data cable 52 and telephone cable 54. A pre-configured mounting assembly 16 replaces the removed mounting assembly 16. The pre-configured mounting assembly 16 is then electrically coupled

and installed into housing 12. Alternatively, the removed mounting assembly 16 can be reconfigured by installing the desired electrical/communication receptacles and electrically coupling them to a cable/connector 50. (Page 6, lines 11-17)

VI. ISSUES

1. Whether Claims 1-3, 5, 9-12, 14 and 15 are anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 4,536,612 (Domigan).
2. Whether Claims 6-8 and 13 are unpatentable under 35 U.S.C. § 103(a) over Domigan in view of U.S. Patent No. 4,967,041 (Bowman).

VII. GROUPING OF CLAIMS

Appellant submits that Claims 1-3 and 5-15 stand or fall together.

VIII. ARGUMENTS

1. CLAIMS 1-3, 5, 9-12, 14 and 15 ARE PATENTABLE UNDER 35 U.S.C. § 102(b).

In the Final Office Action dated December 23, 2004, Claims 1-3, 5, 9-12, 14 and 15 were rejected under 35 U.S.C. § 102(b) as being anticipated by Domigan.

Domigan discloses a box for raised floors (Figs. 1 and 2) including a main housing 2 having sidewalls 4 and 5 (column 1, lines 31-33). Sidewalls 4 and 5 of the power sections each are provided with apertures to mount wire connectors 27 and 28. Conductors 30 and 31 connect the respective wire connectors 27 and 28 and receptacles 21 and 22 (column 2, lines 12-16). There is a power-through feature in that connector 27 is a power-in connector and connector 28 is a power-out connector thereby allowing a daisy chain connection of multiple boxes (column 3, lines 6-15 and the Figs.). The Examiner further states that, "The Cambridge Advance Learners

Dictionary defines a connector as ‘a device at the end of a wire in an item of electrical equipment, which holds the wire in position’. In conclusion, the Examiner stated that reference number “21” of Benscoter discloses a cable connector releasably directly connected to a pass-through connector on the inside of the housing.” (March 9, 2005 Advisory Action, page 3).

The Examiner referred to U.S. Patent No. 4,857,016 (Benscoter et al.) for the first time in the Final Office Action. Appellant respectfully submitted in a response to the Examiner that the citing of an additional reference for an anticipation rejection under 35 U.S.C. § 102 is improper and should have caused the Final Office Action to be a non-final Office Action and prosecution continued.

Benscoter et al. disclose a component for flexible wiring systems (Figs. 1, 2 and 2A) including a connector 1 having a socket contact 21 that is disposed in cavity 16 with joinder head 26 in bore 23 of shield section 5. Intermediate body 28 is in bore 24 of contact mounting section 14 and crimp head 27 is in bore 25 of the contact crimp section. Socket contact 21 is supported in contact mounting section 13 of connector 1, with intermediate body 32 having spring fingers 33 and tabs 34. The contact/conductor assembly is mounted in the wire connector by inserting joinder head 26 into bore 25 and pushing it into bore 24. Spring fingers 33 collapse to accommodate bore 24. Inward motion is continued until tabs 34 engage shoulder 34b. At that time fingers 33 are released from bore 24 and extend outwardly so that if contact is pulled in the opposite direction the fingers will engage shoulder 24a (column 4, lines 36-53).

In contrast, claim 1, recites in part:

at least one pass-through connector releasably directly connected to said electrical cable connector on the inside of said housing.

(Emphasis added). Appellant submits that such an invention is neither taught, disclosed nor suggested by Domigan, Benscoter et al. or any of the other cited references, alone or in

combination and includes distinct advantages thereover.

Domigan discloses a box for raised floors including connectors 27 and 28 connected by wires to receptacles 21 and 22, respectively. Domigan teaches the electrical wiring of a connector in a housing to a receptacle that is then accessible from the interior of an underfloor box.

Domigan does not disclose in the specification a connector that is directly connected to either connector 27 or 28 on the inside of the box. Nor, does Domigan illustrate a connector directly connected to connector 27 or 28, which the Examiner has indicated to be a pass-through connector. While the Examiner has argued that contact 21 of Benscoter et al. is releasably directly connected to a pass-through connector, Appellant respectfully disagrees. The Examiner has indicated that socket contact 21 can be disconnected from the connector by compressing spring fingers 33 located in the connector and pushing the socket contact 21 out of the connector.

In contrast, Benscoter et al. indicates that if socket contact 21 is pulled in the opposite direction the fingers engage shoulder 24a to prevent the removal of contact 21 from connector 1. To follow the Examiner's suggestion would be such that it would require access to both sides of connector 27 and the use of some unidentified tool to compress fingers 33, since they are clearly not compressible by the human hand. This would require access to both sides of connector 27, which is not normally possible since the box is fastened to the floor and electrical conduit, and often surrounded with concrete. This operation is not practical and even if possible would be contrary to the common understanding of the definition of a connector. A connector is defined as, "a fixture (either male or female) attached to a cable or chassis for quickly mating and breaking one or more circuits." (*The Illustrated Dictionary of Electronics*, 6th Edition, Copyrighted 1994 by TAD Books, McGraw Hill, Inc.). The operation suggested by the Examiner is contrary to this definition in that even if the Examiner's operation could be carried out, it could not be quickly carried out for the making or breaking of one or more electrical circuits. In contrast to the

references cited by the Examiner, Appellant's invention does not require rewiring of the internal portion of a floor box to accomplish the separation and/or establishment of electrical circuits, rather Appellant's invention includes a separation of connectors. For example, in Domigan access through opening 50 may allow an operator to remove screws holding receptacles 21 and 22 in position. However, wires 30 and 31 which connect, respectively, with connectors 27 and 28 remain connected in connectors 27 and 28 and are not disconnectable from connectors 27 and 28 apart from access to the other side of connectors 27 and 28, as discussed above. In contrast, Appellant's invention complies with the common understanding of the word 'connector' and the electrical cable connector is releasably directly connected to the pass-through connector on the inside of a housing. Appellant respectfully submits that the definition used by Appellant from the Illustrated Dictionary of Electronics is a more accurate description of what a connector is.

Now, looking at the definition of a connector proffered by the Examiner, which includes the phrase, "which holds the wire in position". Considering the Examiner's position, that the socket contact is a connector, then begs the question as to what the wire is held in position relative to? In the Examiner's position the wire would not be held in position relative to anything except the socket contact itself to which it is attached. If the Examiner's application of the definition is applied, then even the insulation on the wire near the end of the wire is 'a connector' because it holds the wire in position relative to the insulation itself. Appellant strongly disagrees with this use of the definition and submits that the Examiner's use of the definition is not supported by the common understanding of those familiar with electrical connectors in the art. In support of this assertion, the United States Patent and Trademark Office patent database was searched for the patents, which included the phrase "electrical connector" in the title of the patent. As shown on Exhibit 'A' there were 6,016 patents in the database since 1976, which include this phrase. Of the fifty most recent patents of the search, five of the patents were selected at random, based on a

random number generator, which selected the 4th, 27th, 29th, 36th and 46th entries in this list. In each case the understanding of electrical connector corresponds with Appellants understanding. These five patents are included as Exhibits 'B'-'F'. In U.S. Patent No. 6,890,193, connector 1 is described as including a plurality of conductive signal contacts 10 arrayed in a constant pitch in a first direction A1, a conductive ground plate 20, and insulator 40 retaining or holding contacts 10 and ground plate 20, and a conductive shell 60 covering insulator 40. Contacts 10 are arranged in regular intervals in a longitudinal direction of connector 1 (column 3, lines 14-22). In U.S. Patent No. 6,878,009 connector 100 is described as including an insulative housing 102 provided with a plurality of contacts 41 (column 3, lines 22 and 23). U.S. Patent No. D503,927 illustrates an electrical connector having a body with what appears to be electrical contacts positioned at predetermined locations (Figs. 1 & 2). U.S. Patent No. 6,875,022 discloses a connector 8 having an insulative housing 80 and a plurality of electrical contacts 81 received in housing 80 (column 1, lines 28-31). U.S. Patent No. 6,869,301 discloses a connector 11 having an insulating housing 13 in a metal shell 15 covering the front end 14 of insulating housing 13. Metal shell 15 is provided with a plugging face 16 for contact elements 10 at a front face thereof (column 3, lines 59-67). The foregoing five patents are illustrative of what is commonly understood to be an electrical connector, which is in concert with the use of the term by the Appellant, and contrary to the description utilized by the Examiner. Further, the Benscoter et al. patent relied upon by the Examiner clearly defines connector 1 as having a housing having socket contacts 21 disposed in cavity 16, with no reference of a socket contact 21 being a connector. Therefore, Domigan, Benscoter et al. and any of the other cited references, alone or in combination, fail to disclose, teach or suggest at least one pass-through connector releasably directly connected to an electrical cable connector on the inside of the housing, as recited in claim 1.

Appellant's invention has an advantage over the cited references, in that the pass-through

connector allows for the quick disconnecting of an interior wiring configuration by simply disengaging a connector that is connected to the pass-through connector. Accordingly, Appellant submits that claim 1 and claims 2, 3, 5, 9 and 15 depending therefrom are in condition for allowance, which is hereby respectfully requested.

In further contrast, claim 10, recites in part:

a pass-through connector ... releasably directly connected to said electrical cable connector on the inside of the underfloor receptacle box.

(Emphasis added). Appellant submits that such an invention is neither taught, disclosed nor suggested by Domigan, Benscoter et al. or any of the other cited references, alone or in combination and includes distinct advantages thereover.

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provided with a plugging face 16 for contact elements 10 at a front face thereof (column 3, lines 59-67). The foregoing five patents are illustrative of what is commonly understood to be an electrical connector, which is in concert with the use of the term by the Appellant, and contrary to the description utilized by the Examiner. Further, the Benscoter et al. patent relied upon by the Examiner clearly defines connector 1 as having a housing having socket contacts 21 disposed in cavity 16, with no reference of a socket contact 21 being a connector. Therefore, Domigan, Benscoter et al. and any of the other cited references, alone or in combination, fail to disclose, teach or suggest a pass-through connector releasably directly connected to an electrical cable connector on the inside of an underfloor receptacle box, as recited in claim 10.

Appellant's invention has an advantage over the cited references, in that the pass-through connector allows for the quick disconnecting of an interior wiring configuration by simply disengaging a connector that is connected to the pass-through connector. Accordingly, Appellant submits that claim 10 and claims 11, 12 and 14 depending therefrom are in condition for allowance, which is hereby respectfully requested.

2. CLAIMS 6-8 AND 13 ARE PATENTABLE UNDER 35 U.S.C. § 103(a).

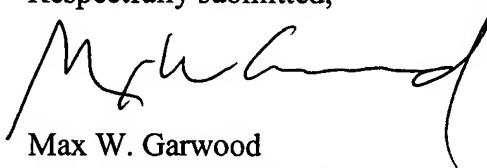
In the Final Office Action dated December 23, 2004, claims 6-8 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Domigan in view of Bowman.

However, claims 6-8 depend from claim 1, and claim 13 depends from claim 10, and claims 1 and 10 are in condition for allowance for the reasons given in the previous argument. Accordingly, Appellant submits that claims 6-8 and 13 are in condition for allowance.

IX. CONCLUSION

For the foregoing reasons, Appellant submits that claims 1-3 and 5-15 are neither taught nor suggested by the cited references, alone or in combination, and claims 1-3 and 5-15 are therefore in condition for allowance in their present form. Accordingly, Appellant respectfully requests the Board to reverse the final rejections of the appealed claims.

Respectfully submitted,



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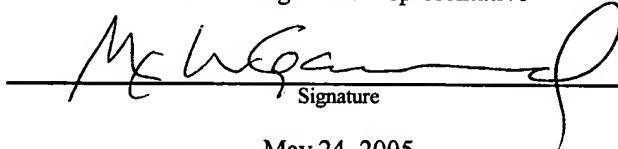
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Exhibits A-F

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Max W. Garwood, Reg. No. 47,589

Name of Registered Representative



Signature

May 24, 2005

Date

**X. APPENDIX**

1. An underfloor receptacle box system, comprising:

an electrical cable connector;

a mating power connector;

a housing having a plurality of openings including a first opening and a second opening;

a lid detachably attached to said housing substantially closing said first opening;

at least one pass-through connector, said at least one pass-through connector being at least partially disposed in said second opening, said at least one pass-through connector releasably directly connected to said electrical cable connector on the inside of said housing and to said mating power connector on the outside of said housing; and

an insert having at least one angled wall, said insert being removably connected to said housing, said insert having a continuous wireway between said at least one angled wall and said housing.
2. The system of claim 1, further comprising at least one of an electrical power receptacle, a telecommunication receptacle and a data receptacle connected to said insert.
3. The system of claim 2, wherein said electrical power receptacle is electrically connected to said electrical cable connector.
4. Cancelled

5. The system of claim 1, wherein said housing has at least one additional opening configured for the passage into said housing of at least one of electrical power cable, telecommunications cable and data cable.

6. The system of claim 1, wherein said lid has at least one slot along at least one edge, said at least one slot providing for the passage of electrical interconnections into said housing.

7. The system of claim 6, wherein said lid includes a bezel that is detachably connected to said housing, said lid hingeably connected to said bezel, said bezel having at least one retaining hook which coacts with said at least one slot thereby retaining electrical conductors.

8. The system of claim 7, wherein said housing portion is configured to be mounted below a finished floor level, said bezel being substantially at said finished floor level and connected to said housing.

9. The system of claim 1, wherein said at least one angled wall of said insert is two angled walls and said insert includes a bottom attached between said two angled walls, said wireway continuous between said bottom and said housing.

10. A method of reconfiguring an underfloor receptacle box, comprising the steps of:
removing a mounting assembly from the underfloor receptacle box;
disconnecting an electrical cable connector from a pass-through connector, said pass-through connector being releasably directly connected to said electrical cable connector on the

inside of the underfloor receptacle box and a mating power connector on the outside of the underfloor receptacle box; and

installing a pre-configured mounting assembly into the underfloor receptacle box.

11. The method of claim 10, wherein said removing step includes the steps of:
detaching said mounting assembly from a housing of the underfloor receptacle box; and
unplugging at least one of said electrical cable connector, a data connector and a telephone connector.

12. The method of claim 11, wherein said installing step includes the sub-steps of:
connecting at least one of said electrical connector, said data connector and said telephone connector to said mounting assembly; and
attaching said mounting assembly to said housing.

13. The method of claim 10, further comprising the step of removing a bezel with a hingedly attached lid.

14. The method of claim 10, further comprising the steps of:
removing at least one receptacle from said mounting assembly; and
attaching at least one receptacle to said mounting assembly.

15. The system of claim 1, wherein mating connector is connected to one of a source of electrical power, a source of data and a source of telecommunications.

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Results of Search in 1976 to present db for:

TTL/"electrical connector": 6016 patents.

Hits 1 through 50 out of 6016



























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










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PAT. NO.	Title
1 6,890,220	T Electrical connector assembly
2 6,890,213	T Electrical connector
3 6,890,208	T Electrical connector apparatus and method
4 6,890,193	T Electrical connector improving both functions of magnetic shielding and ground connection
5 6,890,189	T Electrical connector with improved mating interface
6 6,890,184	T Electrical connector for conveying signals between two circuit boards
7 6,887,114	T Electrical connector with high performance contacts
8 6,887,098	T Combined electrical connector
9 6,887,090	T Electrical connector with retention clip

Exhibit A

- 10 D504,665  Electrical, connector terminal
- 11 6,884,117  Electrical connector having circuit board modules positioned between metal stiffener and a housing
- 12 6,884,116  Surface-mount electrical connector having shell with front and rear mounting posts formed adjacent front and rear ends of the shell
- 13 6,884,112  Electrical connector having improved securing member
- 14 6,884,106  Electrical connector assembly
- 15 6,884,091  Electrical connector assembly
- 16 6,884,089  Electrical connector with fixity members having similar shapes as contacts from which contact portions are omitted
- 17 6,884,083  Electrical connector
- 18 D504,401  Electrical connector
- 19 6,881,103  Electrical connector with TPA retention
- 20 6,881,102  Terminal locking mechanism for hybrid electrical connector
- 21 6,881,097  Electrical connector of at least two-direction card insertion type
- 22 6,881,090  Rotatable no strip no crimp electrical connector for wires
- 23 6,881,081  Electrical connector assembly with connection assurance features
- 24 6,881,073  Electrical connector
- 25 6,878,018  Electrical connector
- 26 6,878,014  Electrical connector assembly and container
- 27 6,878,009  Electrical connector assembly and wire protector
- 28 6,877,222  Method for manufacturing a high frequency electrical connector
- 29 D503,927  Electrical connector
- 30 6,875,055  Electrical connector
- 31 6,875,046  Electrical connector with twisted pair strain relief
- 32 6,875,045  Electrical connector with deformable insert
- 33 6,875,031  Electrical connector with circuit board module
- 34 6,875,030  Electrical connector box with customizable bus bar circuit assembly
- 35 6,875,027  Electrical connector assembly with complementary recess and projection interengagement

- 36 6,875,022  Electrical connector assembly with rotatably assembled pick up cap
- 37 D503,683  Electrical connector
- 38 D503,682  Electrical connector
- 39 6,872,104  Electrical connector for interconnecting a circuit board and a vibration module in an electronic apparatus
- 40 6,872,100  Terminal locking mechanism for hybrid electrical connector
- 41 6,872,091  Coaxial electrical connector with a switching function
- 42 6,872,085  High speed, high density electrical connector assembly
- 43 6,872,084  Electrical connector assembly
- 44 D503,383  Electrical connector
- 45 6,869,321  Dual female electrical connector and connector module
- 46 6,869,301  Electrical connector
- 47 6,869,291  Electrical connector having improved elastomeric contact pressure pad
- 48 D503,150  Electrical connector housing
- 49 6,866,552  Electrical connector with a terminal pin alignment plate
- 50 6,866,550  No-crimp reusable universal electrical connector
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